

CLAIMS

What is claimed is:

1. An assembly for use in a chemical-mechanical apparatus, comprising:
 - a pad having at least a first aperture therethrough;
 - a platen for supporting said pad, said platen having at least a second aperture therethrough; and
 - a substantially transparent plug including at least a first section and at least a second section, the first section positioned substantially within the first aperture and the second section positioned substantially within the second aperture, the second section being partially hollow;
 - a light transmitting and receiving probe having a first portion and a second portion, the first portion having a diameter larger than the second portion, and the second portion being adapted to fit within the hollow section of the substantially transparent plug.
2. An assembly as set forth in claim 1 wherein the platen is constructed of a non-metallic material.
3. An assembly as set forth in claim 1 wherein the platen has a plurality of holes for delivering a chemical to the pad.
4. An assembly as set forth in claim 3 further comprising a manifold coupled to the platen for providing a chemical to the platen.
5. An assembly as set forth in claim 3 wherein the exterior of the platen is constructed of a non-metallic material.

6. An assembly as set forth in claim 4 wherein the exterior of the platen is constructed entirely of a non-metallic material.

7. An assembly as set forth in claim 4 wherein the exteriors of the platen and the manifold are constructed entirely of a non-metallic material.

8. In a chemical mechanical wafer processing apparatus, a platen for supporting a pad, the pad being in substantial contact with a workpiece being processed, a manifold for delivering chemicals to the platen, the exterior of the platen being entirely constructed of non-metallic material.

9. A chemical mechanical wafer processing apparatus as set forth in claim 8 wherein the non-metallic material is a plastic.

10. A chemical mechanical wafer processing apparatus as set forth in claim 8 wherein the non-metallic material is a ceramic material.

11. A chemical mechanical wafer processing apparatus as set forth in claim 8 wherein the platen is entirely constructed of non-metallic material.

12. A chemical mechanical wafer processing apparatus as set forth in claim 9 wherein the non-metallic material is a plastic.

13. A chemical mechanical wafer processing apparatus as set forth in claim 9 wherein the non-metallic material is a ceramic material.

14. In a chemical mechanical wafer processing apparatus;

a polishing pad;

a platen for supporting the polishing pad,

a manifold for delivering a chemical to the platen,

a workpiece substantially in contact with the polishing pad supported by the platen,

a light transmission medium for transmitting and receiving light to and from the workpiece, one end of the medium extending above the top of the polishing pad, the other end of the transmission medium having a hollow portion for receiving a light transmitting and receiving probe, thereby providing a light transmitting and receiving probe in close proximity to the workpiece.

15. An apparatus as set forth in claim 14 wherein the light transmission medium is used as a registration guide for positioning the pad on the platen.

16. An apparatus as set forth in claim 15 wherein the light transmission medium is trimmed to be substantially flush with the top of the pad.

17. In a chemical mechanical wafer processing system;

a platen for supporting a polishing pad,

a manifold adjacent and in contact with the platen for providing a chemical to the platen,

the manifold being maintained in mutual contact with the platen by means of a series of clamps spaced along the periphery of the platen and the manifold.

18. A chemical mechanical wafer processing system as set forth in claim 17 further comprising a series of latches spaced along the periphery of the platen and the manifold to further maintain the platen and the manifold in mutual contact.

19. A chemical mechanical wafer processing system as set forth in claim 17 wherein the system comprises a plurality of manifolds and wherein the manifolds are mutually connected by means of pressure bonding.

20. In a chemical mechanical wafer processing system comprising a polishing pad and a platen for supporting the polishing pad, a method for releasing the polishing pad from the platen comprising:

providing a through opening in the platen from the side of the platen opposite the pad to the side of the pad, and

inserting a tool into the hole from the side of the platen opposite the pad, through the platen and lifting an edge of the pad from the platen.